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Instructions for use

THREE NEW OR UNRECORDED APOIDEA FROM SAGHALIEN (*HYMENOPTERA*)

By

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(With two Textfigures)

Familia *Andrenidae*

Andrena florea sachalinensis subsp. nov.

♀. Black. Underside of antennal flagellum and tegulae somewhat brownish-black. Apical half of first abdominal tergite, second tergite and basal half of third tergite red. Posterior margin of first to third abdominal tergites and first to fourth sternites discoloured and pale brownish. Legs reddish-black, tarsi brownish. Wings transparent, slightly clouded with pale brownish-yellow, nervures and stigmata dark brownish. Scutellum and abdomen very shiny. A median longitudinal line on the caudal area of propodeum very much shiny. Clypeus and mesonotum slightly shining. Front and vertex of head, and propodeum almost mat.

Body covered with pale fulvous or greyish-yellow long hairs. Hairs on the inner orbits of eyes, upper half of front, vertex, and on mesonotum somewhat darker and pale blackish. Posterior margin of third and fourth abdominal tergites each with a white and narrow hair-band. Three basal tergites almost hairless and with the exception of very coarse hairs along the posterior margin and the sides. Third, fourth and fifth tergites each with a black hair-fringe which is coarser on third tergite. Apical fringe on fifth tergite very dense and brownish-black. Second to fourth abdominal sternites each with a pale apical hair-fringe, fifth sternite with a pale brownish-black apical scopa. Entire surface of sternites densely covered with very short, darker hairs. Hairs on the apical segment darker and blackish. The sides of fourth and fifth abdominal tergites with some pale hairs. Hairs or fringe on hind tibiae somewhat dark red or blackish above and pale fulvous beneath. Tibial spurs pale fulvous.

Clypeus with an impunctate, shining median longitudinal line. Clypeus very distinctly, deeply and densely punctured, the punctures are becoming smaller and denser towards the sides. Supraclypeal area also densely punctured. Front

between clypeus and eyes somewhat coarsely and minutely punctured. Labrum impunctate and shining. Front, vertex and temples almost impunctate but somewhat leather-like in texture. Mesonotum with very coarse, irregular, small punctures. Punctures on scutellum slightly denser than those on mesonotum. Mesopleura with dense, shallow but somewhat large punctures. Postscutellum and propodeum almost impunctate, leather-like in texture and not shining.

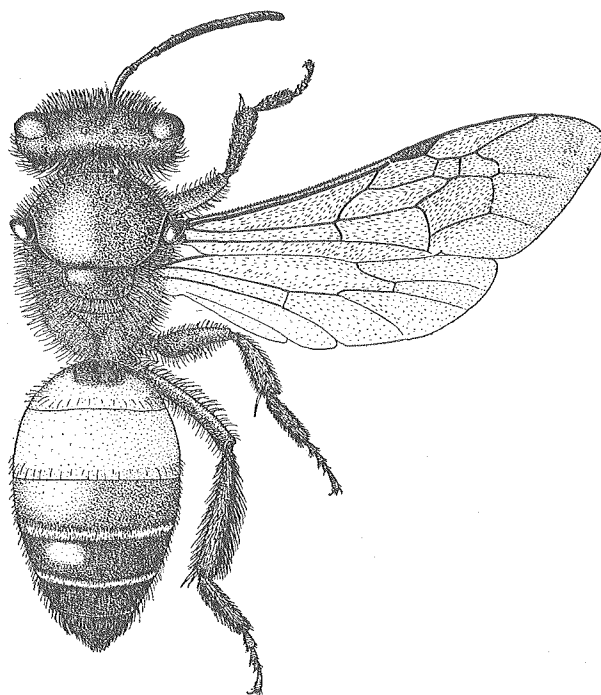


Fig. 1

Andrena florea sachalinensis subsp. nov., ♀.

Abdominal tergites almost impunctate. Posterior margin of second to fourth tergites very slightly depressed (to be seen only in certain aspect). Pygidial area very minutely and densely granular with the margin slightly furrowed or depressed and unsculptured. Abdominal sternites impunctate.

Head, seen in front, much broader than long, breadth: length = ca. 70:55. Inner margins of eyes almost parallel to each other. Front very broad, breadth of front: breadth of an eye (seen in front) = ca. 52:9. Head, seen in profile, with temples broader than an eye, temples somewhat triangularly developed posteriorly at the middle. Oculocellar line very much longer than postocellar

line which is distinctly longer than ocelloccipital line. Clypeus broader than long, moderately swollen, with the anterior margin slightly depressed. Malar space broader than long, about twice as broad as long. Third antennal segment about as long as fourth and fifth segments put together, very long and slender. Propodeum rounded, with the caudal, median, longitudinal line deeply furrowed. Abdomen rather compressed above and below.

Length: Head + Thorax 5 mm. Abdomen 6 mm.

Fore wing 8.5 mm. Hind wing 6.5 mm.

Width: Head 3.5 mm. Thorax 3.0 mm. 3rd abdominal tergite at the base 3.5 mm.

Holotype: 1 ♀, Konuma, S. Saghalien, 17. vi. 1931, M. HORI leg., preserved in the collection of the Central Experiment Station of Saghalien, Konuma.

Paratype: 1 ♀, Konuma, 15. vi. 1930, T. ISIVAMA leg., preserved in the collection of the Entomological Laboratory, Kyūsyū Imperial University, Hukuoka.

Habitat: Saghalien.

Japanese Name: *Karahuto-akane-himehanabati*.

This new subspecies differs from *Andrena florea florea* FABRICIUS in having the mesonotum not wrinkled and the abdomen not punctured. *Andrena florea* FABRICIUS has hitherto been regarded as a mediterranean species, having been represented mainly in South Europe, but also in Central Europe as far north as Holland and England. However, the occurrence of the species in Saghalien suggests that the species may be accepted as a Euro-Siberian (Angaran) form. We can imagine that the ancestors of this species originated in Mongolia and spread westwards into Europe and eastwards into the Far East, and at last they were isolated into two forms (*florea florea* and *florea sachalinensis*) by the influence of the ecological and climatical conditions. Assuming that such suppositions are correct, we may conclude that Central and South Europe and Saghalien (and possibly its neighbourhood) may be the only suitable "ecological islands" in order to survive at the present time for *Andrena florea* FABRICIUS.

The general appearance of *Andrena florea sachalinensis* is very similar to *Andrena rosae alfkeni* FRIESE from Irkutsk, Siberia, but the latter has the margin of the pygidial area not furrowed.

Familia *Prosopidae*

Prosopis annulata (LINNÉ)

1758 *Apis annulata* LINNÉ, Syst. nat., Ed. 10a, I, p. 578.

Specimen examined: 1 ♂, Tomarikisi, 29. vii. 1930.

Japanese Name: *Karahuto-tunobuto-tuyahimehanabati*.

The male of this species is characterized by the shape of the antennal scape (the scape is triangularly dilated and somewhat flat and the flagellum is attached to the supra-apical portion of the scape).

The species is regarded as belonging to a boreo-alpine species and very widely spreads over Norway, Leland, Finland, Kurland, Germany, Austria ("Niederösterreich, Steiermark, Tirol, Kärnten"), Hungary, Switzerland, France, Morocco, Russia, Siberia, Mongolia, Manchukuo, Saghalien (new record) and as far east as Kamchatka. I also think that the species is a typical representative of the Angaran element.

***Prosopis tamanukii* sp. nov.**

♀. Black. Head and thorax mat, abdomen shining. Front with narrow, long, yellow markings between clypeus and eyes. Humeral angles and the basal one-fourth of hind tibiae yellow. Tegulae with a very small yellow spot. Apex of mandibles slightly ferrugineous-black. Tibial spurs pale fuscous. Wings transparent, slightly and uniformly dusky, with nervures and stigmata dark brown or brownish-black.

The sides of abdominal tergites without a hair-fringe. Hairs on the terminal segment of abdomen dense, comparatively long and pale fuscous-black. Lower half of clypeus with comparatively long but coarse, fuscous hairs.

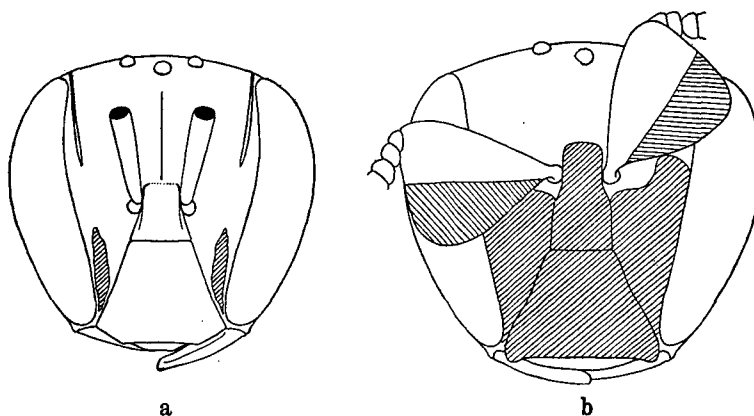


Fig. 2

a: Face of *Prosopis tamanukii* sp. nov., ♀.

b: Face of *Prosopis annulata* (LINNÉ), ♂. Yellowish portions slantly hatched.

Lower half of front, supraclypeal area and clypeus impunctate. Labrum impunctate. Upper half of front, vertex and temples with very dense, minute

but distinct punctures. Punctures on thorax very slightly coarser than vertex, on the posterior half of mesopleura much more coarser, on scutellum much coarser than mesopleura and on postscutellum very dense, irregular in size and somewhat granular. The sides of propodeum mat and leather-like in texture. A triangular basal area of propodeum shining and coarsely but distinctly reticulate. Caudal area of propodeum very shallowly or weakly reticulate. Abdomen impunctate. First tergite entirely polished. Second and following segments strikingly minutely wrinkled (to be seen only in certain aspect).

Head, seen in front, almost as long as broad. Inner margins of eyes strongly convergent below. Postocellar line very slightly longer than oculocellar line. Oculocellar line very much longer than oculooccipital line, but less than twice the length of oculooccipital line. Head, seen in profile, with temples very slightly broader than an eye, temples well-developed. Front moderately convex, with an interantennal carina broad and distinct, with a distinct, median, longitudinal impressed line below anterior ocellus. Clypeus slightly broader than long. Labrum wider than long, with a broad, median, longitudinal elevation. Malar space almost linear. Mandibles short with the apex bifid. Posterior margin of second to fourth abdominal tergites slightly depressed only at the sides.

Length: Head + Thorax ca. 3.5 mm. Abdomen ca. 3.5 mm. Fore wing 5.2 mm. Hind wing 4.0 mm.

Width: Head 1.8 mm. Thorax 2.0 mm. 2nd abdominal segment 2.0 mm.

Holotype: 1 ♀, Konuma, S. Saghalien, 12. vii. 1929, K. TAMANUKI leg., preserved in the collection of the Central Experiment Station of Saghalien.

Habitat: Saghalien.

Japanese Name: *Tamanuki-tuyahimehanabati*.

This species is related to *Prosopis communis* NYLANDER from Europe, but may easily be separable from the latter by the size of the temples of the head.

The species is also near to *Prosopis annulata* (LINNÉ) mentioned above, but may be distinguished from the latter by the sculpture of the abdomen.

Further the species is very closely related to *Prosopis indistinctus* MORAWITZ of North-west China, but the latter has the propodeum differently sculptured.

I express my hearty thanks to Professor TEISO ESAKI of the Kyûsyû Imperial University for his kind guidance and to Mr. KOICHI TAMANUKI and the late Mr. MATSUJI HORI of the Central Experiment Station of Saghalien for their kindness in submitting the materials for identification.